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3206-64

Cy 5 of 6  
25 AUG 1962


MEMORANDUM FOR: Deputy Director for Science and Technology  
ATTENTION :   
SUBJECT : Significant OSA Activities

Per your request of 21 August 1964, forwarded herewith  
is a brief statement of significant, past and present, OSA  
activities.

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JAMES A. CUNNINGHAM  
Deputy Assistant Director  
(Special Activities)

Attachments: (1) As stated

PS/OSA:  (25 August 1964)

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1. The Office of Special Activities, Deputy Director for Science & Technology (OSA-DD/S&T), was formed for the purpose of conceiving, developing, producing, and operating integrated covert photographic and electronic intelligence collection systems utilizing sophisticated and advanced scientific and technological instrumentation and vehicles. The organization is comprised of a small contingent of scientists and engineers working closely with support specialists (administrative, contractual, personnel, finance, logistic, communications, security, and operations officers) and industry for the purpose of achieving maximum speed and efficiency in carrying out its assigned mission.

2. Among the more significant accomplishments of this component have been the development of the U-2, the A-12, and the CORONA Satellite Programs.

3. The development of the U-2 from drawing board to first flight was accomplished in the short span of only eight months. In addition to U-2 development, OSA has continued its responsibility for program management, product improvement, and operational control.

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4. At the time that the U-2 became operational, it was generally assumed that the life expectancy of the program would be two years. Therefore, the technical personnel of OSA proceeded to develop a follow-on supersonic aircraft. The A-12 is the product of their efforts.

5. There is little doubt that without the foresight of OSA, an aircraft with the advanced characteristics of the A-12 would not be in existence today. The operational concept envisages a world-wide reconnaissance capability from a United States land base. It is expected that a completely operational configuration will be attained in early 1965.

6. The revolutionary development of camera systems for the U-2 Program motivated OSA to consider satellite photography applications. In concert with USAF, OSA subsequently initiated a research and development program to provide acceptable intelligence photographs taken from earth satellites. The result of this effort has been the highly successful CORONA Program, the accomplishments of which greatly exceeded original expectations, and has also led to a family of related systems.

7. The Office of Special Activities is now focusing

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its capability on more advanced manned aircrafts, and  
satellite systems to obtain indications intelligence data  
and ELINT.

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TRANSMITTAL SLIP		DATE 21 Aug. 1964	
TO:			
ROOM NO. 6B-13	BUILDING Hg		
REMARKS:  Private conversation. Please return by COB, Monday, 24 August.			
FROM			
ROOM NO. 3E-30	BUILDING Hg		
FORM NO. 241 1 FEB 55		REPLACES FORM 36-8 WHICH MAY BE USED.	
		☆ GPO : 1957-O-439445 (47)	

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### The Scientific and Technical Collectors

The work of the Deputy Director for Research is concerned with highly technical and sophisticated intelligence collection.

In the Office of Special Activities under the Deputy Director for Research there has been brought together an unusual aggregation of outstanding specialists for the purpose of conceiving, developing, producing and operating an integrated intelligence collection system utilizing scientific and technological achievements of the most sophisticated and advanced nature. This unusual grouping of people contains a small cadre of scientists and engineers, skilled communicators, security officers, materiel and other logistical experts, financial specialists, accomplished operations officers, dedicated and resourceful administrators all integrated into a single organization for the purpose of achieving the maximum speed, efficiency and security in translating the concepts into successful collection operations.

The outstanding qualities of this organization have been recognized by Dr. Edwin Land and Dr. James Killian, two of the nation's most respected scientists. They have pointed out in reference to the Office of Special Activities that there has been assembled an organization for the design and production of a very advanced vehicle, the development of all special features, the development of highly sophisticated sensing and

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recording devices and for other things, and that in the opinion of these men this type of an organization was non-existent anywhere in the world and furthermore was so unique and valuable that it must be preserved. They stated that it was beyond their imagination that Khrushchev or any foreign country could believe we had assembled under one management the type of competence that has resulted in the production of this new system.

Among the more significant accomplishments of this unusual group has been the development of the U-2. The development itself was an outstanding technological achievement going from drawing board to first flight in eight months. The execution of the U-2 reconnaissance overflights necessitated the finest type of team work among such specialists as physicists, electrical engineers, meteorologists, logisticians, communicators and operations planners. Thus the same element within the Agency responsible for the development itself has also had the continued responsibility for program management, product improvement, command and control.

Illustrating the collective expertise of this whole group of professionals has been the senior operations planning officer. This officer knows the U-2 in every respect of its design, technology and capability to such an extent that taking this knowledge coupled with the inputs of

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weather experts, target planners and others, he has been able to plan many hundreds of U-2 missions including alternate as well as primary routes with such skill that there has never been a flight failure due to fuel exhaustion or any other defect in planning. Indeed, his planning has been so expert that on the average fuel reserves at the end of a mission have been 10% or less of capacity manifesting a maximum realization of the aircraft's capability for each given set of circumstances.

Intelligence achievements through scientific and technical means are far too numerous and varied to recount in any detail. These have included everything from very small concealed devices to large mobile platforms and major ground installations. They have covered everything from various sensing devices to techniques for measuring phenomena associated with rocket firings to re-entry. Some have been active and others passive.

One of the most recent and current projects that demonstrate the resourcefulness of some of the Agency's scientific intelligence officers working in collaboration with intelligence analysts and other methods of collection is one employing the use of balloons of such configuration as to produce predetermined radar cross-section measurements. Taking advantage of natural air currents and a knowledge of their behavior, it has been possible to experiment with different cross-sections at different

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altitudes and distances while watching through other electronic means the Soviet air defense reactions to the approach and subsequent tracking of these objects as they drift toward and over Soviet territory. Such an operation must of course take into account not only the technological considerations but be so conducted as to appear legitimate weather observations and avoid the arousing of suspicion or undue concern. This project added significantly to our knowledge of the deployment and capability of Soviet air defense. The operational usefulness of such a project in addition to the basic intelligence of a target country's capabilities is obvious.

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